APPENDIX F

SCORP WETLANDS PRIORITY CONSERVATION PLAN UPDATE

INTRODUCTION

The *1989 Wetlands Priority Conservation Plan* was prepared by the Office of Energy and Planning (Previously the Office of State Planning). The first update of this plan occurred in 1994, with the *1994 SCORP Wetlands Priority Conservation Plan Update* and again for the 2003 SCORP. This document serves as the third such update. The *2008 SCORP Wetlands Priority Conservation Plan Update* provides updated information about the state's inventory of wetlands; presents an overview of wetland protection programs; and outlines major accomplishments since the last update. Much work has been done since the last update as indicated in the following summary.

EXTENT OF WETLANDS

In 2002, Complex Systems Research Center at the University of New Hampshire completed the New Hampshire Land Cover Assessment to identify statewide land cover and land use. The classification system is based on Landsat Thematic Mapper (TM) satellite imagery and supplemented by several other digital sources as well as field data collection. The assessment developed seven broad classes and 23 specific classes. Based on field checks to determine accuracy, the seven classes had an overall 95.6 percent accuracy level. The 23 classes had an 82.2 percent accuracy level. According to the seven broad classes, 181,710 acres, or 3.1 percent of the total state land area, is comprised of wetlands. This compares to 4.4 percent of state acreage that is classified as open water, 4.4 percent classified as developed, 77.6 percent classified as forest, among others. The classification for wetlands is estimated to have a 95 percent accuracy level.

WETLAND PROTECTION PROGRAMS

State

In New Hampshire, the principal statute for protecting wetlands is RSA 482-A. New Hampshire's wetlands law is administered through the Department of Environmental Services Wetlands Bureau with oversight by the Wetlands Council (as established in RSA 21-O:5-a.).

Wetlands perform numerous functions and provide important environmental benefits. Wetlands protect the quality of water in our lakes and streams. They remove excess nitrogen and retain sediments with contaminants, such as metals or the nutrient phosphorus. This prevents the nutrients and contaminants from entering the waterways, thus ensuring the quality of waters downstream, some of which serve as critical water supplies. Water quality is equally important for the animals that live in surface waters. Wetlands located along waterways and shorelines

buffer the natural wind and waves, as well as the human-generated waves from boating activity. In addition, erosion and sedimentation are reduced when organic matter accumulates and provides a surface on which other plants may grow.

Wetlands help to reduce floods by acting like a sponge, slowing runoff from upland areas and releasing it slowly and reducing peak flood flows downstream. Conversely, wetlands help keep streams flowing in dry periods because groundwater is often discharged into wetlands, and they continue to release the water, even without additional rain. This is important for adequate water supply and wildlife habitat.

Estuarine areas and coastal marshes – where saltwaters and freshwaters mix --are among the most ecologically productive areas in the world. Tidal wetlands are nurseries for finfish and shellfish. In tidal areas, retention of sediment is especially important to minimize the deposition of fine sand or silt in shellfish beds. Tidal wetlands serve as spawning and nursery areas for fish, including those that are commercially harvested. Commercial fisheries harvests in New Hampshire were valued at $22 million in 2005.

Wetlands provide essential habitat for wildlife. Wetlands support almost two-thirds of New Hampshire's wildlife in greatest need of conservation. Some small seasonal surface waters known as vernal pools -- temporarily flooded depressions that lack breeding fish populations -- are the breeding habitat for amphibian species that live in upland area most of the year. Larger wildlife, such as moose, depends on wetlands for their food source as well. In New Hampshire, hunting generates $71 million in revenue and provides more than 1,400 jobs.

The essential functions of wetlands may be impaired, and the benefits may be reduced, when wetlands or surface waters are dredged (disturbance to wetland soils or to surface waters and their banks) or filled (the placement of any material or structure in wetlands, surface water, or one of several other protected areas), or structures are built in or adjacent to those wetlands and waters. In 1967, New Hampshire enacted one of the earliest wetlands laws in the country to protect these natural resources and their functions and values. In addition to wetlands, the New Hampshire law – now known as RSA 482-A – also protects several other significant resource areas: surface waters, upland tidal buffer zone, sand dunes, the banks of surface waters, and uplands within 100 feet of municipally designated prime wetlands.

Most disturbances to wetland soils impacts require a wetlands permit from the NH Department of Environmental Services (DES), regardless of the size of the impact. Applicants seeking permits for dredge or fill activities must document that the impacts have been avoided and minimized. Municipal conservation commissions have an advisory role in the state wetlands permitting process (particularly RSA 482-A:11, III(a)).

For projects with larger permanent permitted impacts, DES requires that the permittee compensate for the unavoidable loss of the functions and values from the proposed dredge or fill work. This is referred to as "compensatory mitigation" and can be accomplished by one or more of the following four methods:

- Wetlands construction: the creation of wetlands in upland areas. Creating more wetlands often ruins good quality uplands to make poor quality wetlands, and is expensive and complex.
- Wetland restoration: the re-establishment of a filled, dredged, or drained wetland to its historic condition, so as to restore lost functions, by removal of fill, restoration of hydrology to the area, or by such other means as are necessary. In tidal areas, this often means restoring the tidal flows to more areas and allows the salt-tolerant plant species to re-colonize the area. In freshwater areas, removing old fill is often the first step in restoring a wetland. In both of these situations, these efforts often are more successful because the water to "feed" the wetland was there before and is still present.
- Permanent protection of upland/wetland complexes with a conservation easement - an area of land that is contiguous to a wetland and that contributes to the functions and values of that resource. The preservation of buffer areas is necessary to maintain the functions and values of the wetlands, since most of the wildlife species that inhabit wetlands require the adjacent uplands to survive. Conservation easements do not replace wetlands; instead they prevent future degradation of the wetlands they abut.
- When a permit applicant can show to DES that three other options for wetland mitigation are impracticable, the applicant may pay a fee into DES's Aquatic Resource Mitigation (ARM) Fund and DES can use the fund to perform high value conservation, wetland restoration or creation, or aquatic resource improvements.

In the five-year period from 2001 to 2005, approximately 700 acres of wetlands were lost. On average, New Hampshire loses more than 130 acres of wetlands each year. These losses were partially offset by compensatory mitigation in the form of creation or restoration of 168 acres of wetlands, by restoration of wetlands as the primary purpose, and restoration of un-permitted fill as a condition of the permit approval (for unrelated projects). In addition, conservation easements placed on land totaling 9,213 acres during the five-year period will benefit the wetlands resource forever.

For more information:

NHDES Wetlands Bureau
http://des.nh.gov/wetlands/

NH Wildlife Action Plan
http://www.wildlife.state.nh.us/Wildlife/wildlife_plan.htm

Natural Heritage Bureau, Dept of Resources and Economic Development
www.nhnaturalheritage.org

New Hampshire Association of Conservation Commissions
www.nhacc.org

Federal

Wetlands and navigable waters in New Hampshire are protected by federal law under Section 10 of the River and Harbor Act of 1899 and Section 404 of the Clean Water Act amending the Federal Water Pollution Control Act of 1972. The federal permitting authority is the U.S. Army Corps of Engineers (Corps), in coordination with the other federal resource agencies -- the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service, and the National Marine Fisheries Service (part of the National Oceanic and Atmospheric Administration). However, since 1992, the New England District of the Corps has issued a Programmatic General Permit (PGP) in New Hampshire, which delegates the majority of permitting to DES, with some oversight by the Federal agencies, as needed, issuing individual federal permits in certain situations, including where permitted impacts exceed three acres.

The newly reissued New Hampshire PGP continues the expedited review process for activities in Corps jurisdiction under Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899 and Section 103 of the Marine Protection, Research, and Sanctuaries Act.

This PGP is designed to authorize activities formerly covered under the Nationwide Permit (NWP) program and the prior PGP that expired on June 2, 2007. This newly issued PGP became effective on June 28, 2007.

Projects with minimal individual and cumulative effects on the aquatic environment will be approved administratively under this PGP. Projects not meeting the PGP's terms and general conditions, which includes the requirement that projects authorized by the PGP and that have minimal effects and secondary (indirect) and cumulative adverse environmental impacts, are subjected to an Individual Permit review. Federal exemptions, which are not necessarily the same as the State of New Hampshire's exemptions, are also not altered by the PGP. In addition, for projects authorized pursuant to the PGP, project proponents must obtain the appropriate or State approvals when required in order for the PGP authorization to be valid.

Federal Acquisition Programs

- Federal Migratory Bird Conservation Fund
- US Fish and Wildlife Service Federal Aid; Pittman-Robertson and Dingell-Johnson Funds.
- Land and Water Conservation Funds (LWCF)
- North American Wetlands Conservation Fund

Other Federal Programs and Policies

- Executive Order 11990, Protection of Wetlands, 1977
- Executive Order 11988, Flood Plain Management, 1977
- Fish and Wildlife Coordination Act
- Endangered Species Act of 1972
- National Environmental Policy Act (NEPA) of 1972
- Coastal Zone Management Act of 1972
- National Wetlands Inventory

Local
New Hampshire State law provides a number of options to municipalities for protecting wetlands. The following outlines some of those techniques. A more detailed explanation of these techniques is included in the *1989 Wetlands Priority Conservation Plan* and the *Municipal Guide to Wetland Protection.*

- Establishment of a Conservation Commission under RSA 36-A (This commission serves in advisory role in state wetlands permitting process, preparation of a natural resource inventory or a wetland inventory.);
- Master Plan (RSA 675:6);
- Designation of Prime Wetlands (RSA 482-A:15);
- Drafting of Local Wetland Regulations:
    - Zoning (RSA 674:16-21),
    - Cluster or open space development (RSA 674:16-21),
    - Subdivision (RSA 674:35,36), and
    - Site plan review (RSA 674:43,44);

- Land Acquisition - fee simple (Communities can fund acquisition in several ways, including but not limited to open space bonds and designating a portion or all of the local land use change tax to a conservation fund. Communities are also partnering with national, state, regional and community-based land trusts to acquire key conservation lands. Acquisition tools include fee simple, conservation easements, right of first refusal, donations, and bargain sales.); and

- Conservation Easement.

MAJOR ACCOMPLISHMENTS
Since the 1994 SCORP update of the *Wetlands Priority Conservation Plan*, significant progress has been made in wetlands protection as discussed below:

- Designation by the US Fish and Wildlife Service of the Silvio O Conte National Wildlife Refuge in the Connecticut River valley across four New England States, including New Hampshire. As part of the planning effort, roughly 180,000 acres of "special focus areas", targets for conservation, were identified. The "special focus areas" identified in New Hampshire consist of 1,155 acres of non-forested wetlands and over 5,800 acres of uplands.

- The US Fish and Wildlife Service has acquired over 16,000 acres of land as part of Lake Umbagog National Wildlife Refuge.

- The New Hampshire Fish and Game Department acquired 1,261 additional acres of habitat for waterfowl through its Waterfowl Conservation (Duck Stamp) Program.

- The Great Bay National Estuarine Research Reserve, managed by the New Hampshire Fish and Game Department, encompasses over 10,000 acres of tidal waters. Efforts continue to promote informed management through linked programs of stewardship, public education, and scientific understanding.

- The Great Bay Resource Protection Partnership (GBRRP) was formed in 1994 to identify and protect significant habitat areas in the Great Bay region. This successful partnership is comprised of statewide, regional, and local non-profit conservation organizations, municipalities, and state and federal agencies. Over the last several years, the GBRRP has produced a Habitat Protection Plan identifying over 14,000 acres of important habitat, organized into 25 Significant Habitat Areas. These Significant Habitat Areas range from 400 to 10,000 acres in size. As of January 2002 the Great Bay Resource Protection Partnership has protected 4,710 acres of critical habitat around Great Bay. Local communities and other organizations have protected an additional 3,020 acres that the partnership has been able to use as match to leverage federal funds.

- The General Court passed a bill, effective January 1, 2000, establishing a dedicated fund for fisheries habitat protection, restoration, and enhancement. A $1 fee from each fishing license sold and managed by the NH Fish and Game Department supports this fund. The funds can be used for efforts involving riparian land protection, stream bank stabilization, removing barriers in streams, habitat assessment, in-stream habitat work, etc. For example, funds were recently used to purchase a conservation easement on a parcel of land along the Mad River in Farmington resulting in the protection of approximately 1,000 feet of riparian habitat.

- The McGoldrick Dam and the Winchester Dam on the Ashuelot River in southwest New Hampshire were removed in order to restore riverine habitat and migratory fish populations. These are the first dams to be removed specifically for riverine ecosystem restoration. In 2004, New Hampshire Fish and Game and DES removed the head-of-tide dam on the Bellamy River, the first dam removal in the seacoast.

- In 1994 the Natural Resources Conservation Service identified 31 tidal restrictions on New Hampshire's Seacoast. Since then, New Hampshire Coastal Program and its partners have eliminated 21 restrictions, restoring over 650 acres of salt marsh.

- The New Hampshire Coastal Program is partnering with other agencies and organizations to reverse degradation caused by salt marsh ditching. To date, 16 projects have restored about 118 acres of marsh. The goal is to improve hydrological functions on the high marsh surface via ditch plugging and pond creation. Restoration will improve habitat for a variety of birds, fish, and shellfish, and will increase the presence of mummichogs (mosquito-eating fish) to naturally manage mosquito populations and eliminate the need to use larvicides on a consistent basis.

- The New Hampshire Estuaries Project (NHEP) was dedicated and inducted into EPA's National Estuaries Program in 2001. The New Hampshire Estuaries Project completed its comprehensive management plan in 2000 and now focuses efforts on plan implementation. NHEP is currently hosted by UNH.

- The Office of Energy and Planning and University of New Hampshire Complex Systems Research Center completed wetlands mapping through the New Hampshire GRANIT drawing from National Wetlands Inventory (NWI), LANDSAT Thematic Mapper (TM) satellite data, and Natural Resource Conservation Service soil data. At present, LANDSAT data is available for the entire state; NWI maps have been computerized for the entire state; and soils data (in a computerized form) is available for all counties in the state.

- Complex Systems Research Center at the University of New Hampshire also completed the New Hampshire Land Cover Assessment to identify statewide land cover and land use. The 2002 assessment includes one broad classification of wetlands, as well as three targeted wetland classes (forested wetland, open wetland, tidal wetland).

- The Audubon Society of New Hampshire and the Office of State Planning published *Buffers for Wetlands and Surface Waters, A Guidebook for New Hampshire Municipalities* (1997). The publication provides guidance about ways to protect wetlands and surface water buffers through zoning, acquisition and educational means, and provides a scientific basis about the importance of naturally vegetated buffers. This guide is available through the Office of Energy and Planning (http://www.nh.gov/oep/resourcelibrary/HandbooksAndOtherPublications.htm).

- The Office of Energy and Planning published *Data Requirements for Site Review: Guidance for Planning Boards* (1999). This report presents guidelines for required soil and wetland related information needed for subdivision or site plan review applications. This guide is available through the Office of Energy and Planning (http://www.nh.gov/oep/resourcelibrary/HandbooksAndOtherPublications.htm).

- The Audubon Society of New Hampshire published *The Method for the Comparative Evaluation of Nontidal Wetlands* to assist communities in evaluating and making rational decisions about their wetland re sources. Known as the NH Method, this evaluation technique provides municipalities with a practical means of determining a wetlands functional value. This guide is available online through the Audubon Society, ftp://ftp-fc.sc.egov.usda.gov/NH/Ecological_pubs/NH_Method_Part1.pdf).

- The New Hampshire Fish and Game Department revised and re-published *Identification and Documentation of Vernal Pools in New Hampshire* to provide guidelines for locating vernal pools and identifying vernal pool species. This document is available for sale through the New Hampshire Fish and Game Department (for more information: http://www.wildlife.state.nh.us/Shop/shop_books.htm).

- The New Hampshire Fish and Game Department issued the *Wildlife Action Plan* (2006) (http://www.wildlife.state.nh.us/Wildlife/wildlife_plan.htm).

- The New Hampshire Fish and Game Department published *Identifying and Protecting New Hampshire's Significant Wildlife Habitat: A Guide for Towns and Conservation Groups*. This document is available for sale through the New Hampshire Fish and Game Department (for more information: http://www.wildlife.state.nh.us/Shop/shop_books.htm).

- The Joint Board of Licensure and Certification maintains a list of Certified Wetland Scientists across New Hampshire.

STRATEGIES FOR CONTINUED WETLANDS CONSERVATION

The State of New Hampshire is committed to aggressive actions in the conservation of the state's wetlands. During the next five-year period, the following strategies will be employed.

- Develop management plans for State fee-owned conservation properties.

- Continue to support the work of the US Fish and Wildlife Service in assessing lands for inclusion in the National Wildlife Refuge System.

- Continue to acquire and enhance wetlands habitat through partnerships with a variety of statewide non-profit organizations.

- Seek aggressive enforcement of federal, state and local wetlands protection laws and regulations.

- Intensify cooperative efforts among private interests and local, state, and federal governments for the management and conservation of wetlands.

- Continue habitat protection activities through coordination with agencies, corporations, and individuals that affect wetland habitat to minimize habitat damage and strive to obtain mitigation for habitat losses.

- Support efforts to prepare a comprehensive statewide open space and conservation plan that identifies critical wetlands and habitat for state and local acquisition.

- DES is developing a model wetlands ordinance for communities (2007).

- Continue efforts to meet the goals and objectives of the North American Waterfowl Management Plan. Within the Atlantic Coast Joint Venture for the Atlantic Flyway, continue to support waterfowl habitat conservation in the Great Bay, Lake Umbagog and Connecticut River Focus Areas.

Compliance with Section 303 of the Emergency Wetlands Resources Act of 1986

- The SCORP is consistent with the National Wetlands Priority Conservation Plan, prepared by the US Fish and Wildlife Service.

- The SCORP is being coordinated with the NH Fish and Game Department and the US Fish and Wildlife Service.

- The State of New Hampshire will continue to make the acquisition of wetlands for fish and wildlife habitat a priority as stated in the 1989 *New Hampshire Wetlands Priority Conservation Plan.* In consultation with the NH Fish and Game Department, it has been determined that important waterfowl management areas, especially those that are leased, will receive priority for wetland acquisition.